

MANAGING INNOVATIONS IN HIGHER EDUCATION

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ABSTRACT

Discussed in the article is the concept of «technopark» ideology in regional development. The article describes how this ideology is implemented in consumer co-operatives institutions of higher education, dwells on their innovative strategies, best practices and challenges they face. «Technopark» innovative concept is a system of social development ideas which rests on «the economy of competence» values. In Novosibirsk region (Russian Federation) this concept has been adopted as a landmark for its strategic development. This strategy is ensured by great scientific potential of regional universities and Akademgorodok – a recognized and worldwide known scientific center. Its rich traditions should now be re-invented taking into account best international practices.

The article describes best educational and project work practices of Siberian University of Consumers' Co-operatives and its experience in creating innovative infrastructure. Outlined in the article are vital problems, which need to be solved to encourage competitiveness and provide dynamic development of consumer cooperatives universities.

KEYWORDS: «Technopark» innovative concept; innovation; innovative activities; business incubator; innovative competence; project; professional school

Renovation of higher education and academic science in Russia calls for consolidated innovative activities, adoption of new academic and managerial techniques and reinforces the need for new set of competencies developed in educational institutions. These problems being solved, a university obtains a steady position in educational market and its graduates, consequently, get competitive advantage in the labor market.

In Novosibirsk region higher educational institutions (universities) work out their development strategies within the framework of “The Conception of Innovative Development of Economic and Social Sphere in Novosibirsk Region” and “technopark ideology”.

Innovative “technopark ideology” is a set of social development ideas based on competence economy. It suggests:

- Consolidation of innovative mentality which is oriented at knowledge accession, effective implementation of scientific potential and creativity and emphasizes knowledge accession *per se* as a core value.
- Adoption of innovative standards and mentality by producers and consumers.

- New life quality, attractive investment opportunities in the region for its present and prospective residents.

“Technopark ideology” is a sound choice for Novosibirsk region. In the National contest of leading scientific schools (2008) the region ranked third (9%) following only Moscow (53.7%) and St. Petersburg (10.6%). In Siberian Federal District, Novosibirsk region accounts for 54% of granted patents.

To effectively accomplish its strategic tasks the Region is creating innovative infrastructure which involves higher educational institutions. Its main features are as follows:

- Organizational aspect: “technoparks”, innovative centers, industrial base, “business incubators”, technologies transfer centers;
- Financial aspect: banks, venture funds, direct investment funds, technological development funds, etc;
- Informational aspect: libraries, databases, networks and archives;
- Legal aspect: laws and legislative regulations.

Other contributions are: consolidated recourses of academic institutions (affiliated with the Siberian Branch of Russian Academy of Science), Vector – a research-production association, numerous applied research centers as well as strong research divisions in universities and R&D departments of enterprises located in the region.

To reinvent staff training, a system of permanent scientific and technical education has been established and expanded to include primary, secondary and higher education.

An important role in staff training and developing “technopark ideology” belongs to innovative businesses located in Novosibirsk. About 100 leading innovative firms are affiliated with business associations, notably SibAcademInnovatsiya and SibAcademSoft (a non-profit partnership). In 2009 their total product output was estimated at \$270 million, the number of employed amounted to 3 thousand qualified workers, including those awarded an academic degree.

These innovative firms are residents of Novosibirsk technopark. The annual proceeds exceed \$360 million, with 37% accounting for IT, 19% for instrument engineering, and 15% for bioengineering. Science intensive industries in the region show higher rate of development than other sectors. This is encouraged by the support of various financial funds, e.g:

- Novosibirsk Regional Fund for Science and Innovations;
- Regional Venture Fund for Investment in Small Science Intensive Business in Novosibirsk Region;
- Science and Innovative Development Fund of Novosibirsk Region;
- Development Fund for Small Business;
- Support Fund for Youth Initiatives;
- Investment development agencies for Novosibirsk region;
- Novosibirsk Regional Mortgage Lending Agency.

An important element of regional innovative infrastructure is technologies transfer. In Novosibirsk region it is accomplished by numerous agencies. One of

them is Koltsovo Innovative Center – a branch of Russian Technologies Transfer Net (RTTN). Its mission is to promote innovative engineering projects designed in Novosibirsk universities. Other contributors to list here are: academic, corporate and applied-research agencies; small and middle innovative companies, engineering and consulting firms.

As a result of their joint efforts, innovative business in Novosibirsk now obtains consolidated managerial teams which can efficiently perform in market economy and are ready to recognize and satisfy specific market needs, conduct operational development and bring research projects to commercial use.

But this is insufficient to effectively fulfill strategic tasks. Most of the young still show low creativity, poor project proficiency and lack of strategic and marketing vision.

To remove these shortcomings some universities have recently introduced new methods to reinvent their current educational practices, e.g. Creativity Development Centers, Youth Creative Workshops, Development Centers for Innovative Competences, “business incubators” and technological sites. The aim of this change is training innovative staff and promoting startups.

As a contribution to innovative infrastructure and personnel training, Siberian University of Consumer Cooperatives (SUCC) has established an Innovative Competences Center. Its mission is to promote innovative standards in university culture, encourage innovative activity of students, post-graduates and lectures, master science-intensive business methods in production and service industries, find young people capable to generate ideas and perform innovatively. The center has three main tasks: education, marketing and innovation.

Every year a number of events is held in SUCC for students and post-graduates to experience main stages of innovative activity. They include the following:

- Innovative projects contest among students and post-graduates (grant support provided);
- Managing Innovations – a training program;
- IDEA NEXT – an international educational exhibition (grant support provided);
- Siberian Venture Fair – an international exhibition;
- SELIGER – a national students forum;
- INTERRA – an international innovative forum;
- SIBPOLYTECH – an international industrial exhibition (grant support provided).

The chief aspect is innovative project work. Innovative projects in SUCC fall into three main groups: engineering, consulting and PR, IT-projects. *Engineering projects.* Engineering departments of the University provide opportunities for young lectures, post-graduates and students to carry out project work in engineering. For example:

- “Nanotechnologies in growing and storing potatoes”. At SIBPOLYTECH – 2008 the project had a third award nomination for “Actual Innovative Idea”;

- Grain crops cultivation method based on seed quality improvement and soil restoration;

- Innovative method of improving foodstuffs for school catering. The project was nominated for “Actual Innovative Idea” and won a University grant.

A few examples of *consulting and PR projects*:

- “Students advertising and PR agency”;
- “Consulting and auditing agency for innovations promotion”. This project proved its consistency. The designers got an order to develop economic and financial aspects of an innovative enterprise to raise investment from the Venture Fund and Technopark (Kazan, ETpeyd). This project team ranked first in the National Organization Economics Contest held in the South Federal University.

The SUCC Innovative Competences Center is a site for “Personnel Training and Retraining Program for Service Industries and Innovation Promotion”. This is a complex module task-oriented program which suggests basic and advanced programs of personnel training and retraining. It is specially designed for promoting innovation. The program is based on Microsoft IT-Program, team building principles; it attracts the expertise of specialists working in science intensive industries, IT-business and regional innovative agencies.

A few examples of *IT projects*:

- Compiling university schedule based on electronic data acquisition;
- Logon system for MSDN AA users;
- Auto generating statements system for the university library.

As a contribution to career guidance for secondary school students, SUCC has set up a training school where students can learn the basics of business and service. The overriding goal of the project is to create comfort and stimulating learning environment for secondary school students and thereby encourage reinvention and change in basic professional education and career guidance.

A few events held by SUCC and partner secondary schools:

- Classes within educational programs looking into theoretical and practical issues of business and service industry in Russia;
- A conference for higher and secondary school students;
- A line of contests consolidated under the heading “Young people and Business”;
- “No-boundaries Ideas” – a line of business games;
- “Creating your brand” – a line of contests and workshops.

The training school also provides some complex educational programs (perceptively – in correspondence computer-aid format):

- A course for a young innovative entrepreneur: from A to Z;
- IT in present-day business;
- Marketing basics;
- Landscape design;
- Advertising and public opinion management;
- Office management and business etiquette.

These practices are expected to encourage students' and lecturers' creativity and develop their innovative competences. They will also contribute to the reinvention of business education with emphasis on IT-based innovations.

The advantages encouraging successful implementation of innovative educational programs in SUCC are as follows:

- Developed infrastructure, e.g. university resources centers such as Innovative Competences Center along with multiple access (shared) resources centers;
- Rich experience and developed methods of students selection and support;
- Developed practices and expertise in post-secondary technical training.

On the other hand, innovative process in SUCC is impeded by the following bottlenecks:

- Low creativity of students and post-graduates;
- Low motivation and competence shown by a part of the teaching staff;
- Lack of innovative vision: both students and lectures fail to recognize an innovative idea, justify its advantages and convey it to investors;
- Invalidity of most projects in the eye of investors;
- Failure to integrate academic practices and innovative research work;
- Project work failure to meet time limits as a result of poor integration and academic planning;
- Lack of financial and material resources;
- Other.

The problem of financial and material resources is at the bottom of the list. In fact, reasonable resources are available to finance innovative projects (except major "global" ones). What we really lack is challenging innovative ideas with good commercial perspective. There is also a lack of innovative teams to put the idea into practice.

SUCC's experience is an evidence for reinvention of higher education in Russia. It needs integration with academic science and innovative business. Innovative business vision should be cherished from secondary school.

To conclude, Russian economy now needs human resources with developed innovative competences and non-trivial vision, capable to give a jump-start to their organization. Unfortunately, such workers are in little demand in consumer cooperatives. A very small percentage of SUCC students are supported and then recruited by cooperative organizations with this number annually decreasing.

Consumer cooperative universities should develop their academic programs and practices within strategic development framework for national education. The universities need to integrate with employers and regional innovative agencies, build up innovative infrastructure and reinvent their academic and research practices. This will provide competitive advantage and support growing points, encourage creativity and eventually form a new generation of qualified innovative managers.